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CHARACTER OF GOOD AND BAD MILK IN NURSES.

M. ALBERT DONNE, in his *Cours de Microscopie*, observes, that our ignorance at the present day with regard to the character of good and bad milk in nurses, and the mode of distinguishing that which possesses qualities requisite for the life and health of the child, from that which affords to it an unwholesome kind of food, is so great, that it is almost impossible to find a practitioner, nurse, or even a chemist, capable of forming an opinion whether a given specimen be of good or bad quality. We have no hesitation in stating, that all which has hitherto been said and written on the subject, so far at least as regards the peculiar qualities of the milk in relation to the nourishment of infants, is absolutely valueless. No one, certainly, is likely to be deceived by the color, consistence, or even the taste of milk; yet nothing can be more vague than are such characters—it is impossible to attach any real value to them—and since they are based on nothing positive, each person may interpret them as he pleases; consequently the attention of medical men is directed rather to the general health of nurses than to the properties of their milk; and the examination of the secretion, if undertaken, is performed merely as a matter of form. Undoubtedly the general health is an indispensable condition, and one to which especial attention ought to be directed in the selection of a nurse, yet this condition is far from being the only one deserving of consideration, and it is well known that the best health is not always a guarantee for the good qualities of a nurse or the nutritive properties of her milk; the lacteal secretion may be insufficient or abnormal in a woman otherwise perfectly healthy. Is it not a matter of daily observation that one woman, although of a meagre, sickly appearance, makes a better nurse than another woman of the healthiest aspect; and are we not frequently deceived as to the state of the constitution by external appearances? It is evident that the organs endowed with the function of secreting milk, are, so to speak, placed too much without the general economy, to allow of the qualities of this secretion being estimated by the integrity of other organs, and the regularity of the other functions. It is in the milk itself, therefore, that we must search for the character of the good and bad qualities, and until we possess the means of observing its properties, and its good or bad nature in relation to the nourishment of infants, practice will be deprived of any rule, the choice of nurses will be made in an empirical manner, and the determination of mothers who wish to suckle will more frequently be regulated by chance

or caprice, than by reason, or with a due regard to the interests of their children. The subject has recently attracted the attention of M. Girard, who has furnished several cases in illustration of the influence of the nurse's milk upon the health of infants, followed by some very judicious observations. (*Archives Générales de Médecine.*)

CASE I.—In September, 1840, a child, aged 5 months, was brought to me. I was informed that it was strong and vigorous when born, and that it was at once delivered to the charge of a nurse, who had been suckling for fourteen months. It shortly became uneasy, cried incessantly, and was only quiet when at the breast; it gradually grew thin, and diarrhoea was established, the stools being of a green color. When brought to me it presented the following condition: face thin and pale, tongue red with a few scattered aphthous points; belly tense; a bright erythematous redness over the thighs and nates; there were frequent discharges from the bowels of a green color, vomiting of curdled milk several times a-day; the child slept badly, frequently awaking. This was the third time the child had been attacked with an almost similar set of symptoms, with the exception of the aphthæ, which now appeared for the first time, while the other symptoms, generally, were of greater severity than before. The nurse's milk was very alkaline, but was not examined microscopically. The child not improving under the treatment adopted, it was determined to change its milk, and a nurse was obtained who had been suckling for only three months. There was at once a marked amelioration of all the symptoms; in two days the diarrhoea had considerably abated, and at the end of a week all indications of disease were gone.

II.—This was an infant born in November, 1844, strong and well formed. It was suckled by its mother for ten days, when, in consequence of her breast becoming enlarged and painful, a nurse was employed for the infant, of middle size, dark complexion, and about 30 years of age. She exhibited no appearance of disease; her breasts were small; her milk was sweet, of good color, consistence and quantity, and about three weeks old. In a few days the child's sleep became disturbed; it lost flesh, its stools became more frequent, sometimes green, at others black; nausea and vomiting ensued; a bright redness extended over the thighs and nates, and the child became very restless. On the third of December, or about three weeks from its birth, it presented the following appearances: extreme emaciation; dry and rough skin; frequent diarrhoea, with green stools; tense and painful abdomen; extensive erythema over the surface of the body; some vesicles on the scrotum; constant vomiting after taking the least quantity of milk or other fluid; tongue red, and in common with the mucous membrane of the lips and cheeks, covered with numerous aphthous spots. Notwithstanding the treatment adopted, the symptoms became more intense. On the ninth of December, the nurse's milk was examined microscopically by M. Duforsé. There was nothing peculiar in its color; its consistence was that of milk containing much cream; treated with ammonia it became slightly viscous; it was neither acid nor alkaline. A drop magnified 300 diameters, show-

ed, 1st, that the milk globules were in great abundance, as is the case in very rich milk; they were of considerable size; the largest resembling small bladders half filled with liquid, and collapsed. Instead of having a pearl-like brilliancy, most of them, especially the large ones, were of a dull white color somewhat resembling opal; some of them, aggregated together, formed small groups, which could be moved about in all directions, without a single globule being detached. When submitted to slight pressure, the several groups spread out so as to occupy a surface five or six times greater than they presented at first, and they assumed various forms. The smallest quantity of sulphuric ether introduced between the plates of glass dissolved a large quantity of them very rapidly. 2d, the field of the microscope was beset with roundish granular bodies, perfectly colorless, and presenting all the characters described by J. Henlé, Donné, Mandl, Guterbrok, and other micrographers.

To these particles Donné first applied the term, *corps granuleux*, and describes them as invariably existing in colostrum, but disappearing gradually as the milk becomes older, so that after about the twentieth day, and usually much sooner, no trace of them is to be found. They co-exist with ordinary milk globules, but differ from these in form, size, general aspect, and internal composition. They present all possible varieties of form and size; the smallest being about one hundredth of a millimetre, the largest many times that size; they are slightly transparent, usually of a yellowish color, and of a granular aspect, appearing as if composed of a number of small granules aggregated together inclosed within a transparent envelop; very often there exists in the centre or at some other point of these little heaps, a single globule, which is apparently a true milk globule imprisoned within the granular matter. The nature of these granular bodies is unknown. Donné supposes that they consist of fatty matter, and of a peculiar mucous substance. They are insoluble in alkalis, but like true milk globules dissolve in ether, and after the evaporation of the ether small heaps of acicular crystals remain on the glass. (*Cours de Microscopie*.) Although these granular bodies are usually peculiar to colostrum alone, yet Donné remarks, that they, as well as the other peculiarities of the colostrum, as, the large irregular size of the milk globules, which instead of floating free are agglomerated together in small masses, may persist for many months, or even to the end of suckling. The existence of this condition, which can only be discovered by the microscope, may take place in a nurse in perfect health; it however affects injuriously the infant, which usually grows thin, although continually at the breast, and is commonly attacked with diarrhoea. The state of the milk here alluded to, appears to have been that of the nurse in this second case of M. Girard, who continues the narrative of it thus—

The nurse was changed; one being selected whose milk appeared perfectly pure; scarcely two days elapsed when the diarrhoea and vomiting diminished, and speedily ceased altogether; the aphthous patches disappeared, the tongue resumed its natural color, and the erythema faded. From this time the child speedily recovered its good looks, and became fat; its stools being natural, and sleep good.

The third case related by M. Girard is that of a male child, the seventh of a female 28 years old. A former child of this lady had died, when six months old, of a disease marked by intense thirst, extreme emaciation, diarrhœa, with green stools, and glairy vomiting. The present infant took the breast readily, and was apparently in good health, yet vomited occasionally after suckling; the milk to all appearance was perfectly good. About the commencement of the second month the vomiting increased in frequency. Supposing this arose from the child overloading its stomach, the breast was given to it less frequently, and a little sugar and water substituted in the intervals; still, after each time of taking the breast it vomited, though it could retain other liquids; it soon grew thin and pale, and its bowels were alternately constipated and relaxed. Towards the middle of the second month, other symptoms suddenly occurred; the child screamed out, ceased to breathe, and became unconscious; its face and hands assumed a livid hue; this condition lasted for a few seconds, and then passed off spontaneously, leaving the child weak and faint for some hours. Within the next twenty days the child had many similar attacks, which came on at uncertain periods, both day and night, without any obvious cause. Blisters, antispasmodics and baths were employed without any benefit. The vomiting still continued. The milk was now examined microscopically, several times, at intervals of some days, and was found to present an enormous quantity of mucous globules without any other alteration. The mother was opposed to procuring a nurse for her infant. Eight days subsequently, the vomiting having diminished in frequency, the milk was again examined, and presented a diminution in the quantity of mucus; but the vomiting increased in frequency, after a few days, and the milk indicated an augmentation of globules. The child continued to grow thin; a slight diarrhœa showed itself, and the chest affection remained. The mother now becoming alarmed, consented to the employment of a nurse. After the examination of the milk of several, at length a nurse was obtained whose milk, microscopically examined, was perfectly pure. Two days after taking this milk, the vomiting entirely ceased, as well as the symptoms of asthma, and neither of them ever re-appeared; the child speedily became fat, strong and healthy, and so remained.

In remarking upon these cases, M. Girard queries; whether, without wishing to generalize too much, or to establish a theory, from a few facts, it is not logical to observe here a relation of cause and effect. What do we see in the second case? a severe and frequently fatal affection, rapidly on the increase, which had resisted all rational means adopted for its removal, but yielding with the greatest facility to a change in the milk with which the child was fed. The disease coincided with the ingestion of impure milk, and ceased when milk of a pure quality was substituted. In the third case the same thing occurred, although the symptoms were somewhat different. Is it unreasonable, then, to conclude, that certain severe pathological conditions may be produced by alterations in the milk alone, and may be dissipated, even when they have attained a very high degree, by a substitution of milk of good quality? It would be a point of much

importance to ascertain, whether these alterations in the condition of the milk could at any time coincide with the maintenance of perfect health in the child; also, it would be important to determine, if possible, whether a given alteration in the milk is liable to induce a certain pathological affection. Of the two cases last narrated, we observe that in one, a granular state of the milk induced an aphthous affection (*muguet*), whilst in the other, a mucous condition gave rise to symptoms referable to the stomach and to the lungs; at any rate, that these states were coincident with such affections. Of course, it is not meant to be here implied that the pathology of infants is entirely under the influence of the milk they take, but it seems probable that many hitherto inexplicable conditions may be so, and, moreover, that they might be explained by a simple examination of this liquid.—*Transactions of the Philadelphia College of Physicians.*

SPINAL MYELITIS DEPENDENT ON AN UTERINE AFFECTION.

By A. Hall, M.D., Montreal.

Mrs. D——, a lady aged 26, was married in May, 1844, and came with her husband to reside in this city in the month of July following. Her temperament was phlegmatic, and her habit of body decidedly strumous. This was most marked in some of the principal joints, the ligaments of which appeared so destitute of the ordinary tone which characterizes them, that a partial displacement of some of them occasionally occurred when the limbs were made to assume certain positions. This was especially the case with the knee and shoulder joints. To remedy the inconvenience resulting from this affection of the former joint, she wore constantly a laced knee cap. Before marriage her catamenial periods recurred, with constancy, every third week. The flow was usually profuse, attended with considerable pain and a good deal of constitutional disturbance. She stated that she had been more than once under medical care for "flying" pains through her chest, which were felt most acutely, and seemed chiefly seated below her right breast. These had always been relieved by blistering, &c. &c. It was impossible to decide whether these depended on, or were connected with, spinal irritation, but it did not appear that any attention had been drawn to that part from the mode in which she had been treated.

On the 16th July I was summoned hastily to visit her. She was flooding profusely and had every symptom of a threatening miscarriage, an event which occurred on the 22d, although every means were adopted to avert it. Feeling herself comparatively well on the day following, she very imprudently rose from bed, dressed herself, and when visited was found reclining upon a sofa. Although warned of the probable consequences, feeling uneasy towards the evening, and under the idea that exercise might benefit her, she walked several times up and down the room, the result of which was, as may be anticipated, a prolapsus uteri. By a rigid maintenance of the recumbent posture, the use of sponge pessaries,

aided by astringent injections, cold bathing, strict attention to the state of her bowels and the steady use of tonics, in the course of about six weeks she was enabled to move about without much inconvenience; and about the middle of October she removed to her own house, and was fully capable of superintending her own establishment. During this time, however, the catamenia recurred, as usual, every three weeks; the flow persisted profusely for about a week, so that from the end of one period to the commencement of the following, there was scarcely the intermission of a fortnight. The pain which she now suffered, at these times, was always attended with a sensation of "*bearing down*," and a "*dragging feeling*" extending from the umbilicus, which were evidently referable to a greater prolapse of the uterus at such periods than at others. In the intervals, she was, generally speaking, free from pain, and felt so much improved as to be able to dispense with the pessaries altogether.

On the 31st December she walked to town for the purpose of shopping, and having effected her object, she returned home in a cab-sleigh, in which she was most severely jolted. The consequence of this was the re-appearance of every symptom of the prolapse to an aggravated degree. Rest, in the recumbent posture, relieved her to a certain extent. The catamenia returned during the night; and being anxious to receive visitors on new year's day, she got up for the purpose. I found her that day with a flushed face, a quick pulse and considerable febrile excitement, but no other pains than those I have described. In accordance with my advice, she retired to bed. The catamenia was this time more profuse than ordinary, and assumed a menorrhagic character, lasting a few days longer than usual. Such is a general outline of the previous history of the case, and appears to me to be interesting when connected with subsequent events.

For greater convenience, her bed-room had been changed from an upper to a lower story of the house in which she resided; but the head of her bed was unfortunately placed in the vicinity of a window, every crevice of which had been carefully stopped to exclude draughts of cold air, except by an oversight in one direction, immediately opposite which her head laid at the distance of about eighteen inches. On the 12th of January, symptoms of bronchitis showed themselves, which were encountered by the ordinary treatment. In the course of a few days she was attacked by flying pains across the upper part of the thorax. They varied considerably in their direction. Sometimes they would shoot down the arms; at other times across the neck; at other times the whole scalp became involved, from the occiput to the frontal region. Increasing in intensity, the slightest alteration in the position of the head was sure to exacerbate them if present, or induce them if absent. There was scarcely any febrile excitement, her pulse regular, and no headache, except the pain described, which was frequently agonizing. There was, however, nausea and costiveness. There was but little tenderness on pressure in any of the parts in which she suffered these pains. Suspecting spinal irritation, the spine was carefully examined, *but no local evidence of such an affection was discoverable.* Her chest was examined

by the stethoscope, but no abnormal sound, except a mucous râle at the upper part of the left lung was observed. The case was viewed as one of neuralgic rheumatism, and treated accordingly. In the course of a fortnight she was sufficiently recovered to bear her removal to her mother's house, and her strength became there, in a few days more, so far restored as to enable her to walk about, and even to join the family circle. She, however, again labored under the prolapsus, and was again compelled to adopt the employment of the sponge pessaries, and the astringent injections.

From this time her convalescence had every appearance of being progressive, when about the beginning of March a new train of symptoms began to develop themselves. Nausea and vomiting, especially after ingesta—obstinate costiveness—shooting pains across the lower part of the thorax, and apparently along the attachment of the diaphragm—anxious and hurried breathing, with frequent sighing. Her spine was again examined, and a marked tenderness on pressure was now for the first time observed over the seats of the ninth and tenth dorsal vertebrae, pressure here exciting the thoracic inquietude. Remedial measures were immediately directed to this part. This treatment consisted in the employment of repeated blisters, and counter-irritant ointments of tartar emetic and croton oil; the internal exhibition of occasional brisk purgatives, in which the croton oil was the chief ingredient, and a mild mercurial salivation. Bleeding was not deemed expedient, in consequence of her habit of body, and her general debility. There was yet but little acceleration of the pulse, and but a very trifling febrile reaction. The pains and uneasiness, despite of this treatment, which was strictly carried out, augmented, and became most acute, as well as much aggravated by the slightest pressure. On the 14th March, her pulse had increased to 100, with considerable fever and thirst. The dyspnoea increased, especially towards evening and during the night, but remitted towards morning and during the day. She complained of a sensation, as if "*her chest was bound by a hoop*," which now became a new symptom, superadded to those detailed. On the 21st, a remission in the severity of all the symptoms took place, and she both looked and expressed herself as being better. This apparent state of amelioration continued for a few days. Early on the morning of the 24th, I was hastily called up to see her, the message left being to the effect that she was dying. Desirous of availing myself of Dr. Holmes's experience, we from this time attended the case together. We found her recovering from a state of apparently hysterical delirium, in which she had been during the latter part of the night. There was no fever, thirst great, tongue much loaded with a thick white fur, pulse about 96, small, and rather sharp, retention of urine, no alvine evacuation since the preceding morning, constriction across the chest, with darting pains through it as before, sensation of numbness in the lower extremities, with great pain on moving or flexing them. On examining the spine, *no tenderness was experienced on pressing over the originally tender spots, but there was considerable tenderness now over the seats of the fourth and fifth cervical vertebrae.* The catheter was used,

and a turpentine enema administered, which speedily brought away a large quantity of very offensively smelling feculent matter. The urine possessed an exceedingly fetid and highly ammoniacal odor. Her feet were immersed in a hot mustard bath, and the revulsive treatment to the nuchæ was again adopted, the blisters being afterwards dressed by extract of belladonna. A blister was re-applied to the dorsal vertebræ, over the seat of an old one, which was yet uncicatized. Although she had been previously slightly mercurialized, it was deemed advisable to put her again under the influence of mercury, and three grains of calomel, with three grains of camphor, were accordingly prescribed to be taken every three hours. An anodyne draught of tincture of opium, with succinated spirit of ammonia, was instantly administered. In the evening of the same day there was but little amelioration. She had a tranquil sleep, however, under the influence of the narcotic, which required repetition before that effect took place. It was again necessary to use the catheter, and administer an enema. The withdrawal of the catheter was always attended with great pain.

On the 25th, all the symptoms were worse. On the 27th, leeches were applied to the nuchæ without benefit. Pulse 120, smaller, becoming irregular, yet still retaining its sharpness. Tongue dry, and becoming brown. Her intelligence seemed perfect when she was sharply addressed, and her attention engaged on the speaker, but she quickly relapsed into a kind of muttering delirium, to which eventually was superadded subsultus tendinum. She calmly expired on the morning of the 28th.

A known objection on the part of her relatives to *post-mortem* examinations, precluded an examination of any other part than the spine. Forty-eight hours after death, the vertebral canal was opened, and the spinal column exposed. The theca was found throughout its whole length much congested, but without any evidences of inflammation. On running the finger along the cord, at the tenth vertebral space, it suddenly sank into its substance. The theca was slit up, and here, and here only, was any disorganization of the cord perceptible; for the space of about an inch it had undergone a complete ramollissement. The softened tissue was white (not brown or lees color, as usually seen), and the disorganization appeared to have extended through the cord, involving the gray as well as the medullary portion. The cervical portion of the cord was firm, and of the usual consistency.

The close attention which has been bestowed upon pathology, has of late years elicited much useful information relative to the influence which appears to be exerted upon the brain and spinal column by deviations from a healthy state in the various viscera of the body. The sympathetic phenomena which thus develop themselves, have been chiefly studied with reference to gastritis and inflammatory affections generally of the mucous and serous coats of the intestinal canal, and more lately still of the kidneys and urinary apparatus. The principle laid down by Dr. Stokes, "That in all diseases, as a general rule, there is an affection of the nervous system, either local or general, or, in other words, that there

is no disease which we could name, which does not present signs of an affection of the nervous system, either *quoad* the suffering organ itself, or of an affection more general and diffuse," is a perfectly just one, consonant with the experience of all who watch narrowly the progress of diseases, and is a necessary consequence of that very intimate nervous communication which is found to exist, either directly or indirectly, between all parts of the animal organization. Most usually, the reflex phenomena which are thus induced, are the consequences of simple irritation of the nervous centres, not the slightest abnormal appearances having been discerned in the brain or spinal cord after death in cases in which such phenomena were even markedly developed. Instances of this nature might be multiplied, but they are unnecessary, as brevity is my object; but while thus, in the generality of cases, irritation at the peripheral extremities of the nerves, may excite no appreciable morbid alteration in the organization of the brain or cord, there yet can be no doubt, that when long continued and of an exalted character, it may be productive of such effects. The following case, quoted in Stokes's Lectures on the Theory and Practice of Physic, will illustrate this point:—"A soldier was wounded in the right shoulder with a lance, in consequence of which he got an aneurism of the axillary artery, for which an operation was performed. At the moment the ligature was tightened, he experienced exquisite pain in the situation of the ligature, which extended to the brachial plexus; this continued to the next day, and then ceased. On the fourth and fifth days the pain returned with increased violence, and continued until the seventh day, when it became intolerable. He was bloodied, but without any good effect. He then became comatose. His head was drawn backwards; he had alternations of stupor and excitement, and soon after expired. On dissection, the ligature was found to embrace some of the principal branches of the brachial plexus, and there was an abscess of the posterior lobe of the brain, extending to the optic thalamus."

In the Transactions of the Medico-Chirurgical Society of London, for 1841, there will be found an interesting and highly important paper by Mr. Stanley, demonstrating unequivocally that paraplegia may be induced by severe spinal disease, as a secondary affection, without any necessary alteration of structure in the cord or its membranes; affording this valuable practical result, that paraplegia is not always necessarily dependent upon specific disease of the cord, and disclosing a means of resort to a more rational line of treatment in some of such cases. In two only out of the seven cases narrated by Mr. Stanley, were any morbid changes in the cord perceived, and these changes consisted chiefly in vascular turgescence and slight effusion; but these are sufficient to demonstrate the effect on the cord of a persistent irritation at the peripheral extremities of the nerves which supply the kidneys.

To these cases illustrative of the principle laid down, might be cited others, in which *post-mortem* examinations have revealed the existence of inflammation of the meninges of the brain, as a result of inflammatory affections of the intestinal tube. That uterine affections are equally competent to induce similar consequences, cannot be doubted.

We recognize such effects in the mania, delirium, occasionally convulsions, and other symptoms, dependent on the irritation, to say the least, of the great nervous centres, propagated from the suffering organ. The case which I have given affords another proof of the effect of such long-continued irritation, the induction of inflammation and its consequences in that part of the cord more immediately under sympathetic connection with it. We have to remember the anatomical relations of the uterus with reference to the nerves which supply it, and maintain its relations with other parts of the system. The uterus and its ovaries are mainly supplied by the spermatic plexus descending from the renal in which the lesser splanchnic terminates. This nerve arises from the tenth and eleventh thoracic ganglia of the great sympathetic, which communicate directly with the anterior branches of the tenth and eleventh spinal nerves. It was opposite the tenth dorsal vertebra that the ramollissement of the cord had taken place. The circumstances of the case are of too striking a feature to permit us to consider this as a mere coincidence. The uterine irritation, dependent on the prolapsus, can be viewed in no other light than a cause, and the myelitis as its effect; the irritation at the peripheral extremities of the uterine nerves, inducing, in the first instance, by reflex action, symptoms of spinal irritation alone, which, from continued application of the exciting cause, degenerated into inflammation with its consequences.—*British American Journal of Medical and Physical Science.*

INJURY OF THE FOOT, FOLLOWED BY ANOMALOUS CONSTITUTIONAL SYMPTOMS.

By Wm. Williamson, M.D., of White Plains, Alabama.

On the 14th of June, 1842, I was called to see Mr. A. N——, of this State: he was probably about 30 years of age; of robust constitution, fair complexion, light hair, and by occupation a farmer. He gave me the following history of his case:—Some years previous to 1842, he wounded his foot with an axe, dividing it obliquely nearly the whole length, and injuring some of the bones. The wound healed up, leaving a lameness of the foot, which would become painful if he walked much, or wore a tight boot, and it would sometimes become swollen and inflamed. He informed me that eight or ten days previous to the time I was called in, he had worn a new shoe on his foot two or three days; that it compressed it very much, and afterwards it became quite painful and swollen, and for the relief of which he used a variety of means, as bathing, poultices, &c.; that these applications did not subdue the inflammation, but that it ran on until suppuration took place, and he had it lanced. When I saw him the foot and leg were greatly enlarged; they were of a dark red color, approaching to a purple, very painful, and the whole system was very irritable, with daily exacerbations of fever, loss of appetite, and nausea. There was only one open-

ing into the abscess, which discharged a bloody purulent matter. I ordered such medicines as the constitutional symptoms seemed to require—the abscess to be injected with tinct. myrrh, and the foot and leg to be enveloped in a poultice of elm and dogwood barks.

19th.—I found other places required to be opened. The anterior part of the foot, to within about an inch of the ankle, was one large abscess, involving the bones and running in sinuosities in various directions, so that a probe could be passed in among the bones, which felt rough as though deprived of their periosteum. The foot and leg were still greatly swollen and of very dark color; the discharge from the abscess was thin and sanious, with no healthy suppuration. There were daily paroxysms of fever, followed by profuse perspiration, and occasionally there was delirium. I ordered solution of super-acet. plumb. with spts. camph., to be kept constantly applied over the whole of the inflamed part, and the poultice over this; continued the injections into the ulcer, alternating occasionally with the lead solution. The patient to take cinchona pulv. with elixir vit., and nourishing diet.

21st.—The symptoms are worse, with greater appearance of gangrene. The whole of the cuticle, on the under surface of the foot, as far as the abscess, had extended, separated, with some sloughing, and no improvement in the discharge from the ulcer. Ordered an injection of vegetable caustic (prepared from the ash bark) as strong as the patient could bear, to be thrown into the sinuses twice a-day. Opium was given to relieve pain; and the other directions to be continued.

24th.—Great prostration of strength, profuse sweats, no appetite, with cadaverous appearance of the countenance. The injections produced intense pain for a few minutes, but had effected a very salutary change in the ulcer, for it now discharged a quantity of well-formed pus. An increase of the tonics was ordered, with other directions, as before.

26th.—There was less prostration—some little appetite; the swelling is subsiding; the foot has rather a better appearance, and free discharge of pus continues. Same directions.

From 28th to June 3d.—Same treatment. For some days there have been tumors forming on different parts of the body, but owing to the alarming nature of his other symptoms, very little attention was paid to them. They are situated on the thighs, sides, shoulders, &c., and are about the size of a common walnut, without any discoloration in the skin, and very little pain; but firm to the touch and slightly movable. Two of these tumors I opened with a scalpel, and on the 5th two more were thus treated; they were well encysted and contained healthy pus. They soon healed after their contents were evacuated. On the 7th, I omitted the caustic application to the foot, but found the discharge to become worse, and therefore immediately resumed its use. Other abscesses were opened up to the 23d, after which my patient steadily improved, and was soon after restored to vigorous health.

From this time he continued steadily to improve, until he acquired vigorous health, with the exception of a weakness of the diseased foot.

I cannot but think that the caustic injections, made from the ashes of

the ash-bark, had a very salutary result in the local treatment of this case. The development of external abscesses was no doubt a crisis to the constitutional symptoms.—*Southern Med. and Surg. Journal.*

THE LAW WHICH REGULATES THE RELAPSE PERIODS OF AGUE.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—The first article in the thirteenth No. of Braithwaite's *Retrospect of Practical Medicine and Surgery*, On the Law which regulates the Relapse Periods of Ague, by Robert J. Graves, Esq., M.D., &c., Dublin, is one of the most important documents that has appeared for a long time. It constitutes one of the principal steps of that change in the prevalent mode of practice, the necessity of which the sagacity of Dr. Forbes so clearly perceived, and so ably and energetically enforced; not that, in the treatment of the disease under consideration, Dr. Graves, as recommended by Dr. Forbes, trusted to the curative powers of nature, but employed the reputed specific with decided benefit. The value of the law is greatly enhanced by leading the penetrating mind of the Dr. to develop the principle of waiting for an indication before repeating the remedy, and to confirm its truth by induction from positive facts and the test of experience—a principle, if universally and strictly adhered to, which will form a new epoch in medical practice.

The effects of most medicines are of considerable duration, and are accumulative; there are very few whose operations are transient. Under the former may be ranked cinchona; therefore, after it has taken effect, the propriety of not repeating the dose before its influence becomes exhausted is obvious; otherwise, its operation may overpower or interfere with the salutary reaction this remedy is so well calculated to produce. The principle of repetition of doses will apply with equal weight in every disease to which the body is subject. Should the Dr. allow himself to be governed in other diseases by the same principle which he has so happily discovered in the treatment of ague, he would find results equally gratifying and beneficial. He would also find persistence in large and repeated doses without regard to their effect, as is too frequently the case in routine practice, is pernicious and often fatal.

To discover the precise time when, and the circumstances under which, it will be proper to repeat doses of medicine, requires strong discriminating powers of mind and much experience. On this point, the Dr. is very explicit, and has adopted a rule with respect to the use of bark in periodical diseases, which is applicable to every other article of the *materia medica*, and adapted to the cure of every other malady. The rule, taken in the abstract, is, "to give no quinine until a well-marked fit or shadow [symptom] of a fit occurred." This rule, which, in my opinion, is incontrovertible, will prove to be, among the enlightened practitioners of the old school, the first step in the reform Dr. Forbes deems the present state of medical practice imperiously demands.

In the article, which is the subject of this communication, there are

other principles substantially developed, which will, perhaps, as we advance in the investigation, be so firmly established as to give efficiency and certainty in practice which are not, at present, enjoyed. The mathematical precision with which the Dr. arrives at the truth of the rule, or principle, or law, being the result of careful induction, by a well-trained mind, rendering the article doubly interesting and instructive, I am induced to request you to insert it in your widely-circulated Journal.

WILLIAM INGALLS.

"Having noted with much anxiety and accuracy the course of a quartan ague for twenty-seven months, I constructed a table for the purpose of obtaining a connected view of the number and dates of the fits. This table had been made for some time before I discovered that it contained data which authorize us in concluding that the law regulating the periodicity of ague applies not only to the succession of paroxysms, but is extended to the free intervals between them—in other words, that the same law of periodicity which governs the disease while it occasions fits, continues likewise to preside over its latent movements during the intervals when no fit occurs, and thus the true periodic rate is carried on, though as in a clock from which the striking weight has been removed, the usual signal does not mark the termination of each certain definite portion of time. This law, now for the first time brought to light, exhibits a new example of the tenacity with which periodicity clings to a disease, when once firmly impressed on it, and recalls to mind a very similar phenomenon observed with respect to the catamenia, which, having been suppressed for many months, not unfrequently reappear on the very day on which the monthly period would have occurred, had no such suppression taken place.

[Dr. Graves here relates the particulars of an obstinate case of ague in a boy 11 years of age. The disease was at length subdued by large doses of quinine, which, it appears, may not only be given without doing harm, but, as in this case, the disease, though complicated, may be cured solely by the use of large doses of this powerful remedy.]

"With respect to the manner in which quinine was used, the following observations may be made. At first I gave it in the usual manner, until the particular series of fits ceased; and then persisted in its use for ten days or a fortnight; gradually decreasing the quantity taken. This is the method generally recommended by authors, and it is founded on the notion, that it is necessary where the medicine is given in large doses, not to omit its use abruptly, lest the system should feel the loss of this powerful tonic. My experience in this and other cases, leads me to doubt the accuracy of the reasoning powers upon which this treatment is founded, and I am convinced that in following this rule we defeat our own object, by accustoming the constitution to the medicinal effects of the quinine at a time when the ague fit is absent. The quinine is the proper antagonist of the fit, and while the fits require this medicine, it is borne well by the constitution. On the contrary, when the fits are absent, its curative effects appear to be diminished, and the constitution becomes so accustomed to it, that, when the disease again requires it, the medicine no longer exerts its anti-aguish in-

fluence. We have an analogous example in the case of mercury, of which moderate quantities, judiciously exhibited, are sufficient to cure the venereal disease, provided the mercury is given when venereal symptoms are present, and only in the quantity necessary to control these symptoms. If it be given by way of prevention, when these symptoms are not present, or in too great quantity when they are, the system in either case becomes saturated with the mineral, but is not protected from the further ravages of the venereal disease. The second mode of treatment which I adopted was calculated to avoid the inconvenience already pointed out. This method consisted of giving the quinine for four successive days, and intermitting it for the six following days, thus embracing the interval comprehended in three fits. By these means it was hoped to keep the system sufficiently under the curative influence of quinine, while we avoided rendering the constitution too familiar with the medicine; the six-day interval preventing it from becoming saturated by the quinine. This method of treatment seems to have been eminently successful, and under its influence the disease abated in violence, the frequency of the attacks decreased, and the long interval of one hundred and thirty-six days was at last obtained. Finding, however, that, though it had broken the violence of the disease, it had not extinguished it, I tried another on the third plan, which was to give no quinine until a well-marked fit or shadow of a fit occurred, and then at once to use the medicine in large doses, so as to stop the fits as soon as possible. The moment this object was accomplished, the medicine was omitted, and was not again given until the paroxysms recurred, when they were similarly treated. This, on the whole, appears the best method, as it stops the paroxysms speedily, and keeps the medicine in reserve until they appear."

[Dr. Graves gives a long table to show the different days on which the medicine was given, and the doses. From this table it appears that the dose was varied from ten grains in the day to sixty. At the commencement, the doses each day were fifteen or thirty grains in draughts of five grains, but at last they were sixty grains daily, in doses of five grains each.]

CASE OF MALIGNANT PUSTULE.

By W. L. Sutton, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

AUGUST 4, 1840, I was called to see William Jalyers, aged 21, who had been complaining for several days of pain and swelling of the right arm, with some sickness of stomach. To-day he has suffered immensely with distress and a sense of sinking at the præcordia—so much so, that the family feared his speedy dissolution. There is over the inner side and lower end of the radius a pustule about the size of a dime, dark-brown, and surrounded by a vesicular margin, altogether very much like a vaccine pustule at maturity. The hand, fore-arm, and part of the arm, are very much swelled, red and painful; pulse moderately full; tongue

a little furred. Bled to ξ xv. R. Ipecac., 3 ss. immediately ; to be followed at night by calomel, \mathfrak{D} j. Bandage the arm to the shoulder.

5th. Emetic operated pretty well, which together with the bleeding, gave relief for a few hours ; but he has suffered as much this morning as ever. Arm more swelled. Made a crucial incision in the pustule to the depth of half an inch, which produced no sensation. Applied actual cautery, an iron rod about one third of an inch in diameter, at nearly a white heat. When the rod had penetrated about an inch, the patient complained of pain, and the burning was stopped ; the arm freely rubbed with volatile liniment ; a bandage applied, and over that an emollient poultice. R. Ol. ricini to purge off the calomel. After this, friction with the liniment and bandaging were the only remedies used.

After the general tumefaction subsided, there remained a slight tumefaction on the lower part of the fore-arm, about four inches in diameter ; at first red and hard, afterwards it appeared to contain a small quantity of pus. He refused to have it opened. He was directed to rub it with the ointment of stramonium, which appeared to remove the swelling.

When first questioned about having handled any dead cattle, he said that he had not ; afterwards, however, he said that some time before he had skinned a dead cow.

If this was, as I thought, a case of malignant pustule, it was the first I had ever heard of in this section of country. I have since understood that several cases occurred in the county of Harrison, in this State. They were represented as very severe, and I think one or more deaths. I know nothing as to the treatment pursued in those cases.

In the case which I saw, there was a type of disease decidedly more inflammatory than appears to have characterized those which have been reported in Europe. The gastric distress appears to have been as great, and very much of the same character. It is yet doubtful whether the case above reported, occurred idiopathically, or had a connection with the skinning the dead cow. From the time which had elapsed, I am disposed to think the former was true—although I do not know of any case on record, which could be considered of similar origin.

Georgetown, Ky., Sept., 1846.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, SEPTEMBER 16, 1846.

Forest Trees of America.—If it is ever allowable to make a departure from the strict, legitimate purposes of medical journalizing, no better object could draw us aside than the interests of a department of rural life, which refines the moral sentiments, while it instructs the mind, viz., *arborculture*. With a growing taste for the beautiful in nature, as it exists in trees, shrubs and vines—especially in this part of the United States,

where an exterminating warfare against the magnificent forests that formerly spread over the entire face of the country, has been waged by our forefathers, till trees have become objects of special solicitude—any guide, book, or reliable source of information, which instructs us how to produce or nurture them, is becoming more and more valued.

Physicians being men of education, and in most cases, of taste, also, could not have a more rational enjoyment as a relaxation from professional inquietude, than in embellishing their grounds, planting shrubbery, nursing choice-fruits, enriching the soil, and converting every suitable spot which may be their own, into an inviting paradise of trees. Few of us can do much in this way—indeed, it is not necessary; but each one can do something towards developing the resources of the little spot of earth he inhabits, even in the pent-up streets of a city. A town or a country is inviting or repulsive, according to the activity, industry and taste of the inhabitants. An estate, dressed in the living green of nature, not only delights the eye, but softens the harsh points which occur in every individual's life, since the cheerful language of waving boughs and moving leaves is understood and appreciated by all orders of capacities.

These reflections occur on reading an admirable book which has just come from the publishing house of the Harpers, in New York, "On the Forest Trees of America, native and foreign, pictorially and botanically delineated and scientifically and popularly described—being considered principally with reference to their geography and history, soil and situation, propagation and culture, accidents and diseases, properties and uses, economy in the arts, introduction into commerce, and their application in useful and ornamental plantations, illustrated by numerous engravings," by D. J. Browne. No point which would increase the interest of the book to the physician has been neglected by the indefatigable author, for he has introduced what is known of the medicinal properties of each tree. As a work of pleasant reference, in the light of a correct adviser in rural pursuits, or a prompt and acceptable counsellor when a query happens to arise in regard to questions wholly belonging to arboriculture, this is the book of books to consult. Again, it contains a learned digest of all the earlier writers on the same subject, with an infinite variety of practical remarks, intimations and facts, no where else to be found in a form so complete for reference. Those who have a particle of love for the ennobling pursuit which is so thoroughly taught in this truly national treatise, must be gratified with it. It almost persuades us to become a farmer, the first, the best, the highest employment of man.

Chart of Poisons.—Thomas R. Crosby, M.D., of Manchester, N. H., with a degree of care that is deserving of honorable mention, has prepared an alphabetical catalogue of all the poisons to which people are most exposed, or which are sought for criminal purposes; embracing, also, such as are occasionally put up by druggists, through mistake, in consequence of their external resemblance to common articles of medicine—also antidotes, tests, &c. This chart, to which reference was made some time since, is now printed, on a royal sheet, and is offered for sale. It is a valuable compilation, and can be clearly understood by persons having no acquaintance with terms in botany, chemistry, or the *materia medica*; and yet all the technicalities belonging to the subject in the modern works of

science are prominently set forth for the accommodation of such as consider the essence of all science to be in words of difficult pronunciation. This chart is not only worthy of a place in every medical office, but it would subserve, in an eminent degree, the great cause of human benevolence, if it were suspended in the commonest rooms of hotels, bathing houses, druggist shops, country stores, workshops and factories, where all who could read might learn what to do, effectually, when any one had been poisoned by any of the numerous weapons of death recognized on this comprehensive map.

Although there may not be anything really new to the physician in this ingenious production, yet its tabular arrangement, by which all that is essential may be comprehended at once by all who can read, renders it exceedingly valuable to the community at large. The facts in regard to the specific action of each poison were drawn by Dr. C. from the best and latest authorities; and so of the antidotes. By bringing it all into plain English—without losing sight of legitimate science—he has placed those who may derive advantages from his industry, under manifest obligations. Were it in our power to address the non-professional community as readily as we can the medical fraternity, the importance of having this chart exhibited in such places as have been designated, and in private families also—since all are alike exposed to the same accidents, from the same causes—would be urged with more and stronger reasons than have yet been used.

Baltimore College of Dentistry.—The new edifice now being erected in the city of Baltimore, for the College of Dental Surgery, is calculated to be ornamental in its architectural appearance, as well as convenient in all of its interior properties. The following is the plan of the building, which is to be completed seasonably for the coming lecture term, the first Monday in November.

"It will consist of six rooms, viz.

"1st. The lecture room and museum.

"The museum now contains many beautiful specimens both dental and anatomical, in addition to its already valuable collection; the most of these have been recently imported from France, at considerable cost, and it is designed to arrange the whole in the common lecture room of the College, so that they will be constantly before the eye of the student.

"2d. The anatomical theatre.

"3d. The public hall for delivering introductions and holding commencements.

"4th. The mechanical room. This is large, well lighted and conveniently furnished with work tables, a powerful blowpipe and foot furnace, grinding apparatus, finishing wheels and brushes, snips, pliers, screw plates, plaster and metal for models, files, hammers, &c., comprising in short all that is necessary to a complete laboratory.

"5th. The operating or infirmary room. In the course of practical instruction patients will be introduced from day to day, upon whom the professor will perform operations. The pupils will also be afforded opportunities to operate under his superintendence.

"6th. A dissecting room. Here, as in every medical college, the dental student has the opportunity of dissecting for himself—this duty is earnestly

urged on every one, as the only trust-worthy foundation on which to rear the superstructure of the dental art. For this purpose, the dissecting room is ample and well ventilated, and abundantly supplied with subjects."

Dismissed Medical Officers.—Since the third of March, 1789, only four surgeons and fifteen surgeons' mates have been dismissed from the Government service in the United States. The names of each are recorded in the archives of the Secretary of State at Washington, and the date of their permission to retire, but in the published catalogue with which we have been furnished, the causes of their dismissal are not specified. On the whole, taking into view the length of time, 57 years, it shows that the medical reputation of this country will compare favorably with any other recognized profession in civilized life, not excepting even the clerical, since but nineteen, out of the multitude that have held commissions during that period, are shown to have been unfitted by moral delinquencies to remain in honorable employment.

Alumni of the Medical School of Pennsylvania University.—A report of the Medical Department of the University, for the year 1846, by the Faculty of the Medical School, makes a good official appearance, and shows that the new world is not likely ever to be without physicians, while the present six and twenty medical colleges are in operation. This old and eminent School has graduated one hundred and seventy-one students with the degree of M.D., since the 2d of April. The prospects are very excellent for the coming lecture term.

Transactions of the Philadelphia College of Physicians.—A volume, or summary, from April to August, is published—an exchange copy of which has been received. Much that is of practical value to the profession, is to be found in these praiseworthy Transactions, which are recommended to the study of all who can procure the publication.

Health of the Army on the Rio Grande.—We learn from our friends who have just returned, and by letters from the army, that the volunteers are suffering greatly from diarrhoea and dysentery, arising from bad water, bad weather, and diet to which they are unaccustomed. The chief sufferers are the regiments from Tennessee, Indiana, and other States in that region. This is not to be wondered at, as the change of climate and mode of living are so marked. It will be very fortunate if the campaign does not prove disastrous from sickness. No serious mischief seems to be apprehended from Mexican bullets or bayonets. The volunteer regiments now on the southern banks of the Rio Grande, from the States of Ohio, Illinois, Indiana, Tennessee, Mississippi and Alabama, are composed, in a great measure, of the flower of our youth, who have been suddenly ushered into a climate and service to which they are altogether unaccustomed. The wisdom of calling such a body of men into such a service at this season of the year, except under the most pressing emergency, may be questioned; and the "powers that be" will be fortunate, if they escape a reprobation from those States, akin to that which caused the dis-

appointed and afflicted Augustus to exclaim, in the bitterness of grief, "*O Varus, restore me my legions!*"

Let us not indulge evil forebodings, however, but *hope for the best.* It cannot be denied that the troops best calculated to stand this service at this season of the year, i. e. the Louisiana volunteers, and provided, moreover, with a *medical staff* best acquainted with the diseases in the extreme South, have been disbanded; whilst those who have taken the field, have much more to apprehend from *exposures incident to the service*, than from the *sword of the enemy.*—*N. Orleans Med. and Surg. Journal.*

Ibrahim Pacha and his Doctor's Bill.—It is generally known that Ibrahim Pacha spent a few months in the south of France for the benefit of his health, and that an eminent medical man, Dr. Lallemand, left his practice for a considerable time to attend on the son of Mehemet Ali. Nothing was arranged as to the fees or the salary of the M.D., until two or three days before Ibrahim Pacha was to leave Paris, and then he sent 50,000 francs (2000*l.*) to Dr. Lallemand. This sum was not considered satisfactory by Dr. Lallemand, who had been building castles with the munificent sum he expected from the Pacha, and he therefore respectfully submitted that he considered his fees should be estimated at 200,000 francs (8000*l.*) It was a source of great vexation to Ibrahim to have undervalued the services of Dr. Lallemand, yet he did not make up the donation named, but sent 4,000*l.* more to the learned physician, who then declared himself satisfied with the total received, *videlicet*, 6000*l.*—*London Exam.*

Medical Miscellany.—Dr. Sylvanus Everts, of Union Mills, Iowa, received the honorary degree of M.D., at the late commencement of the Indiana Medical College; and seventeen students of the institution were graduated, in course. The school is prosperous.—The New York Journal of Homœopathy has reached the 10th No., and may, therefore, be considered to have good encouragement.—Four thousand two hundred and sixty-five students attended lectures at the twenty-six medical colleges in the United States in 1845 and 6.—Dolly, a negress, lately died on the estate of Richard Wilder, Camden Co., S. C., at the age of 120 years. Four years ago her husband died at the age of 119.—The first stone of the Provincial Lunatic Asylum, was laid at Toronto, with public ceremonies, on the 22d of August.—Prof. Heine, of Worzburg, the most celebrated orthopedist in Germany, died on the 31st of July.—Smallpox is mowing its way through the city of Toronto, at a fearful rate.—Dr. Beigler, the homœopathist, who was sent to the State Prison some years ago, for firing his own premises, is recommended for pardon.

TO CORRESPONDENTS.—Dr. Leonard's "Results of candid Inquiries," &c., Dr. Comstock on the "Animal Origin of Disease," and the paper of "L. E." are received.

MARRIED.—In New York, Dr. Philip De Young, of Philadelphia, to Miss H. E. Souza.

Report of Deaths in Boston—for the week ending Sept. 12th, 89.—Males, 44, females, 45. Of consumption, 9—disease of the bowels, 22—cholera infantum, 4—dysentery, 3—diarrhoea, 1—typhus fever, 9—nervous fever, 1—lung fever, 1—scarlet fever, 2—rheumatism, 1—cancer, 2—apoplexy, 4—hooping cough, 2—infantile, 6—old age, 2—croup, 1—drowned, 2—convulsions, 1—accidental, 1—dropsy on the brain, 1—sudden, 1—inflammation of the brain, 2—disease of the heart, 3—measles, 1—intemperance, 1—erysipelas, 1—scrofula, 1—suicide, 1—teething, 1. Under 5 years, 40—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 11—over 60 years, 8.

A Royal Dose of Seidlitz Powders.—On the first consignment of Seidlitz powders to the capital of Delhi, the monarch was deeply interested in the accounts of the refreshing beverage. A box was brought to the King in full court, and the interpreter explained to his Majesty how it was to be used. Into a goblet he put the contents of the twelve blue papers; and, having added the water, the King drank it off. This was the alkali, and the royal countenance exhibited no signs of satisfaction. It was then explained that in the combination of the two powders lay the luxury; and the twelve white powders were quickly dissolved in water, and as eagerly swallowed by his Majesty. With a shriek that will be remembered while Delhi is numbered with the kingdoms, the monarch rose, staggered, exploded, and in his agonies screamed "Hold me down!" Then, rushing from the throne, fell prostrate on the floor. There he lay during the long-continued effervescence of the compound, spurting like ten thousand pennyworths of imperial pop, and believing himself in the agonies of death, a melancholy and humiliating proof that kings are mortal.

Rare Relish for Medicine.—A missionary, whose labors were bestowed on the natives of Taung, in Southern Africa, states the following amusing fact, in speaking of the characteristics of the people where he was stationed.

"They are passionately fond of medicine, and of being bled, believing that all diseases lie in the blood. I have known individuals, after I had bound up the arm, open the orifice and let the blood flow until they fainted. No matter how nauseous a draught may be, they will lick their lips even after a dose of assafoetida. On one occasion I requested a man at a distance to send some one for medicine. He sent his wife; and having prepared a bitter dose, I gave it into her hand, directing her to give it in two portions, one at sunset, the other at midnight. She made a long face, and begged hard that he might take it all at once, lest they should fall asleep; I consented, when down went the portion into her stomach. I exclaimed, "it is not for you." Licking her lips she asked, with perfect composure of countenance, if her drinking it would not cure her husband."

UNIVERSITY OF PENNSYLVANIA, MEDICAL DEPARTMENT.—Session 1846-47. The Medical Lectures will commence on Monday, November the 2d, and be continued under the following arrangement, to the middle of March ensuing.

Theory and Practice of Medicine,	by	NATHANIEL CHAPMAN, M.D.
Chemistry,		ROBERT HARE, M.D.
Surgery,		WILLIAM GIBSON, M.D.
Anatomy,		WILLIAM E. HORNER, M.D.
Institutes of Medicine,		SAMUEL JACKSON, M.D.
Materia Medica and Pharmacy,		GEORGE B. WOOD, M.D.
Obstetrics and the Diseases of Women and Children,		HUGH L. HOBBS, M.D.

Clinical Instruction at the Pennsylvania Hospital.

The rooms for Practical Anatomy will be open from October 1st to the end of March ensuing. John Neill, M.D., Demonstrator.

Extensive cabinets of Anatomy, Materia Medica, Chemistry, Surgery, and Obstetrics exist, and are in a course of annual improvement.

The Professor of Materia Medica, besides his cabinet, has a Conservatory, from which are exhibited, in the fresh and growing state, the native and exotic Medicinal Plants.

Amount of Fees for Lectures in the University, \$120. Matriculating Fee (paid once only), \$5. Hospital Fee, \$10. Practical Anatomy, \$10. Graduating Fee, \$40.

263 Chestnut Street, Philadelphia.

September 1st, 1846.

Sept. 9—11 Nov. 15

W. E. HORNER, M.D.,
Dean of the Medical Faculty

AUSCULTATION IN DISEASES OF THE HEART.

A TABULAR VIEW of the signs furnished by Auscultation and Percussion, and of their Application to the Diagnosis of Diseases of the Heart and Great Vessels. By O'BRYEN BELLINGHAM, M.D. Member of the Royal College of Surgeons in Ireland, &c. First American from the Second English Edition, with Notes by Usher Parsons, M.D. Providence, R. I. This Chart, like that on Diseases of the Lungs, is printed on a royal sheet, and exhibits at one view the impulse, and sounds furnished by percussion and auscultation in the various diseases of the heart, with the mechanism of their production, &c. Published at the Medical Journal Office. Price 25 cents. Copies can be sent by mail, and orders for them, post-paid, with the money enclosed, will be promptly attended to. Sept. 9.